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WPI Acc no: 2002-366762/

XRAM Acc no: C2002-103863

XRPX Acc No: N2002-286427

Thermal conductive sheet used as heating medium for electronic component, contains thermal conductive filler dispersed in acrylic-type polyurethane binder resin

Patent Assignee: 3M INNOVATIVE PROPERTIES CO (MINN)

Inventor: IGARASHI M; OKADA M; UCHIYA T

Patent Family (3 patents, 98 countries)

| Patent Number | Kind | Date | Application Number | Kind | Date | Update | Type |
|---------------|------|----------|--------------------|------|----------|--------|------|
| JP 2002030212 | A | 20020131 | JP 2000201480 | A | 20000629 | 200240 | B |
| WO 2003002644 | A1 | 20030109 | WO 2002US16743 | A | 20020524 | 200305 | E |
| AU 2002312093 | A1 | 20030303 | AU 2002312093 | A | 20020524 | 200452 | E |

Priority Applications (no., kind, date): JP 2000201480 A 20000629

Patent Details

| Patent Number | Kind | Lan | Pgs | Draw | Filing Notes |
|-------------------------------------|--|-----|-----|------|-----------------------------------|
| JP 2002030212 | A | JA | 8 | 0 | |
| WO 2003002644 | A1 | EN | | | |
| National Designated States,Original | AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW | | | | |
| Regional Designated States,Original | AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW | | | | |
| AU 2002312093 | A1 | EN | | | Based on OPI patent WO 2003002644 |

Alerting Abstract JP A

NOVELTY - The thermal conductive sheet comprises thermal conductive filler dispersed in a binder resin. The binder resin is an acrylic-type polyurethane resin.

USE - As heating medium for electronic component such as personal computer.

ADVANTAGE - The conductive sheet has excellent thermal conductivity even in uneven and curved surface. The conductive sheet excels in adhesion property.

Technology Focus

POLYMERS - Preferred Polymer: The acrylic-type polyurethane resin is a polymerization reaction product of acryl oligomer having at least two hydroxyl groups, and a polyfunctional isocyanate. The viscosity of acryl oligomer is 500-10000 cps.

INORGANIC CHEMISTRY - Preferred Filler: The thermal conductive filler is an inorganic filler particle. The mixing ratio of thermal conductive filler with respect to polyurethane resin is 10-70 volume%. The thermal conductive sheet is produced by non-soluble process.

Title Terms /Index Terms/Additional Words: THERMAL; CONDUCTING; SHEET; HEAT; MEDIUM; ELECTRONIC; COMPONENT; CONTAIN; FILL; DISPERSE; ACRYLIC; TYPE; POLYURETHANE; BIND; RESIN

Class Codes

International Patent Classification

| IPC | Class Level | Scope | Position | Status | Version Date |
|-----------------------------|-------------|-------|----------|--------|--------------|
| C08K-003/00; C08L-075/04 | | | Main | | "Version 7" |

| | | | | | |
|---|--|--|-----------|--|-------------|
| C08J-005/18; C09J-175/04; C09J-007/00; H01B-001/20 | | | Secondary | | "Version 7" |
|---|--|--|-----------|--|-------------|

Original Publication Data by Authority

Japan

Publication No. JP 2002030212 A (Update 200240 B)

Publication Date: 20020131

THERMALLY CONDUCTIVE SHEET

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Language: JA (8 pages, 0 drawings)

Application: JP 2000201480 A 20000629 (Local application)

Original IPC: C08L-75/04(A) C08J-5/18(B) C08K-3/00(B) C09J-7/00(B) C09J-175/04(B)

Current IPC: C08L-75/04(A) C08J-5/18(B) C08K-3/00(B) C09J-7/00(B) C09J-175/04(B)

WIPO

Publication No. WO 2003002644 A1 (Update 200305 E)

Publication Date: 20030109

THERMALLY CONDUCTIVE SHEET

FEUILLE THERMOCONDUCTRICE

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Language: EN

Application: WO 2002US16743 A 20020524 (Local application)

Priority: JP 2000201480 A 20000629

Designated States: (National Original) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

(Regional Original) AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

Original IPC: C08K-3/00(A) C08J-5/18(B) C08L-75/04(B) H01B-1/20(B)

Current IPC: C08K-3/00(A) C08J-5/18(B) C08L-75/04(B) H01B-1/20(B)

Original Abstract: A thermally conductive sheet comprising a binder resin and thermally conductive fillers dispersed in said binder resin, characterized in that said binder resin is an acrylic polyurethane resin. The thermally conductive sheet has flexibility and conformability and also has excellent thermal conductivity and well-balanced adhesion performance.